ENERGY EFFICIENCY TRUST FUND PROGRAM REPORT

January 2012 through December 2012

ILLINOIS DEPARTMENT OF COMMERCE AND ECONOMIC OPPORTUNITY
ILLINOIS ENERGY OFFICE
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SPRINGFIELD, ILLINOIS 62701

ENERGY EFFICIENCY TRUST FUND
PROGRAM UPDATE
For the Period January 2012 through December 2012

INTRODUCTION:

The Department of Commerce and Economic Opportunity (DCEO) administers the Energy Efficiency Trust Fund (Trust Fund) as established by the Renewable Energy, Energy Efficiency, and Coal Resources Development Law of 1997 ("the Law"). The Law requires that funds be spent on projects that promote residential energy efficiency in the state, with emphasis on low-income households. These programs produce two major benefits for the Illinois economy, the efficiency gains that provide substantial savings to consumers and the additional jobs created to install and implement the projects described in this report. Energy efficiency projects furthermore tend to improve building comfort, improve lighting and indoor air quality, decrease unscheduled maintenance and make a positive contribution to the environment through the reduction of unnecessary pollution.

DCEO's Illinois Energy Office administers these funds as stipulated by the Law. Within the Bureau, the "State Energy Office," as designated by the U.S. Department of Energy (U.S. DOE), operates energy efficiency and renewable energy programs involving all sectors of the Illinois economy, including the residential sector. This report covers only those energy efficiency programs funded through the Law. All of these programs embody the benefits of energy efficiency, such as improved occupancy comfort, utility bill savings, reduced energy consumption and improved grid reliability.

Energy efficiency promotes both sound fiscal practices and environmental stewardship. Illinois has the potential to serve as a model state for energy efficiency in its residential structures. Implementation of energy efficiency practices will continue to require collaboration, support and funding from the Legislature and capable third-party implementers, such as consultants, contractors, utilities and cooperatives.

PROGRAM OVERVIEWS:

In 2012 the Energy Efficiency Trust Fund provided funding for several programs designed to meet Trust Fund guidelines. Projects include:

Illinois Energy Efficient Affordable Housing Construction Program

The *Illinois Energy Efficient Affordable Housing Construction Program* was funded from the Trust Fund in 2012 at a level of approximately $1.58 million. This program offers grants to fund incremental costs associated with energy efficiency improvements in residential construction projects targeted to low- and moderate-income households.

This energy efficient housing program has been a highly visible success for DCEO and has garnered support from U.S. DOE, the Illinois Housing Development Authority, the City of Chicago, several major utilities, architectural teams, and numerous affordable housing development networks in the state. The program provides up to $4,000 per unit for new housing developments and up to $4,500 per unit in rehab housing developments. The program results in utility savings averaging over 50% and a return on investment of over 30%. In addition, this program has been an integral part of the Bureau's effort to leverage private investments with public dollars and increase capital available to Illinois developers. Trust Fund dollars have also allowed DCEO to include funding for super-efficient refrigerators, high efficiency air conditioners and more efficient lighting as part of these housing projects. The success and the active support of the allied groups listed above have resulted in a tremendous increase in demand for this program, especially in the greater Chicago area.

In addition to providing affordable housing units for these families and meeting the low-income goals of the Energy Efficiency Portfolio law (ILCS 220 5/8-103), the results of this program are also used to encourage energy efficient building practices in all levels of construction activity in the state. The program also serves as a training ground for tradesmen to learn the latest energy efficient building techniques. The economic efficacy of energy efficient construction practices proven by this program has been and will continue to be publicized to the Illinois development, architectural, and construction industries. Education efforts include presentations at conferences, workshops, and seminars, including the *Affordable Comfort Conference.*

An overview of the *Illinois Energy Efficient Affordable Housing Construction Program* in 2012 is shown below. Projects funded under the program fall into one of three categories; Gut Rehab, New Multi-Family and New Single Family. The table below contains a complete list of grantees.

1. Gut Rehab – In 2012, one gut rehab project was funded. A $1.5 million grant was approved to Ameren Illinois Company to assist the residents of Gallatin, Saline, and Williamson Counties for the incremental costs of installing energy efficient measures as part of the repair and rebuilding of residential properties damaged by the tornado of February 2012.

2. New Multi-Family – In 2012, one new multi-family project received an energy grant. Grantee started or completed construction on 36 new multi-family housing units.

3. New Single Family – In 2012, one new single-family project received an energy grant. Grantee started or completed construction on 14 new single-family housing units.

Additionally, in 2012, one residential retrofit project received an energy grant. Grantee started or completed the retrofitting of 25 single-family housing units.

In total in 2012, the Energy Efficiency Trust Fund awarded $1,694,779 in grants for 4 projects. In addition to the EETF most of these projects were eligible for funding from additional sources, such as the Energy Efficiency Portfolio (EEP), Illinois Housing Development Authority, U.S. Department of Housing and Urban Development, or the City of Chicago. DCEO awarded a total of $1,740,291 from the Energy Efficiency Portfolio for those projects located in the ComEd or Ameren Illinois electric service territories. DCEO estimates that the electricity savings from this program exceeds 3.2 million kWh annually or more than $200 in savings for each home. The savings from natural gas efficiency measures more than double those annual cost savings.

Grantee	Project Name	City	Total Grant Amount	Trust Fund Grant	Units
Retrofit					
City of Springfield	Helping Homes	Springfield	$110,743	$110,743	25
New Single Family					
Habitat for Humanity Sangamon County		Springfield	$56,750	$36,900	14
New Multi-Family					
Bluestem Housing Partners NFP	Hope Housing	Springfield	$72,798	$47,136	36
Rehab					
Ameren Illinois Company	2012 Tornado Relief	Gallatin, Saline and Williamson Counties	$1,500,000	$1,500,000	
Total: 4 projects			**$ 1,740,291.00**	**$ 1,694,779.00**	

The Illinois Energy Efficient Affordable Housing Construction Program is designed to meet or exceed the standards of the national ENERGY STAR® program and the state's current Energy Efficient Building Code (based on the International Energy Conservation Code at the time of construction). Many of the buildings would qualify for LEED certification as well.

Through this program, grant funding has provided the necessary incremental costs to enable several thousand low and moderate income families to reside in super-efficient structures, saving significant energy resources and connected costs. Since *Illinois Energy Efficient Affordable Housing Construction Program's* inception in 1988, 2,572 units have been rehabilitated, 3,083 units of new multi-family housing have been completed, and more than 1,235 new single-family homes have been completed.

Lights for Learning

The Lights for Learning school fund-raiser program provides an opportunity to expand the ENERGY STAR lighting educational program. The purpose of Lights for Learning was to strengthen the promotion of ENERGY STAR lighting by introducing students, teachers, and their communities to specialty CFLs and LEDs, including daylight, 3-way, recessed cans, outdoor lighting applications, and holiday strands. This fundraiser allows schools to accomplish their education goals in promoting a healthy, environmental message for their students and community.

This project fulfills the mandate to impact energy efficiency in residences through the replacement of energy inefficient lighting units with ENERGY STAR recognized units. In addition, this project complies with educational mandates by providing appropriate information to consumers. This project also provides opportunities to partner with schools, U.S. DOE, Midwest Energy Efficiency Alliance (MEEA), and local organizations to help leverage a broad exposure of energy saving information.

Performance Indicator	EEPS Funded	EETF Funded	Total Program
Participating Students (presentations)	20,238	1,567	21,805
Participating Students (Fundraisers)	1,357	112	1,469
Participating Schools (Fundraisers)	142	23	165

During the 2012 calendar year, 184 schools participated in the Lights for Learning Program. The 1,469 students participating in the fundraiser portion of Lights for Learning raised $30,715.70 for their schools and school organizations. The 112 students with EETF funding raised $4,168.75 of aforementioned funds. In total, students sold 18,468 efficient lighting products as shown in the table below. The products sold by the students will save an estimated 527,080 kWh
kWh annually, reducing the energy bills of the students' families and friends by about $79,062 each year (using the Bureau of Labor Statistics average cents per kWh for Chicago area households). The Lights for Learning program also conducted 324 educational presentations that reached more then 21,805 students.

Product Type	EEP Funded	EETF Funded	Total Program
14 watt	3204	273	3477
19 watt	1221	122	1343
23 watt	1080	125	1205
14W 2 Pack (Capsule)	1066	162	1228
14W Reflector	731	49	780
33W 3-Way	590	68	658
19W 3 Pack	1305	204	1509
Sample Pack (13W, 20W, 23W Spiral)	2343	123	2466
CFL Desk Lamp	209	30	239
14W Globe	662	64	726
5W MiniCandelabra Base	454	43	497
Halogen 2 pack 72W	222	12	234
Halogen 2 pack 53W	236	32	268
LED Nightlight	407	56	463
LED Nightlight 3 pack	1092	84	1176
White 25' LED Holiday Strand	284	192	476
Multicolor 25' LED Holiday Strand	842	168	1010
TCP LED PAR 20	61	14	75
Philips EnduraLED A19	50	12	62
TCP 14W PAR 30	35	13	48
Belkin Conserve Socket	378	28	406
BITS Smart Power Strip	95	27	122
TOTAL All Units	**16567**	**1901**	**18468**

University of Illinois' Illinois Center for a Smarter Electric Grid

DCEO is providing the University of Illinois $7 million over five years to support a project that will provide services for the validation of information technology and control aspects of Smart Grid systems. During the first two grants (10-022002 and 12-197001), the Department has provided $4 million in support thus far for this project. The funding for this grant has come both from Renewable Energy Resources Trust Fund and the Energy Efficiency Trust Fund.

The key objective of this project is to test and validate within a laboratory setting how new and more cost-effective Smart Grid technologies, tools, techniques, and system configurations can be used in trustworthy configurations that significantly improve upon the ones that are in common practice today. The Center's also is developing an evolving smart grid testbed (working with Ameren), conducting power system modeling and validation, cyber security assessment, and

examining how renewable energy effects on the grid. They have also coordinated with other smart grid activities at the university, including a joint project with the Bonneville Power Administration.

Grant funds have been used to hire engineering staff, buy equipment and remodel the laboratory facilities, and setup, calibrate and simulate smart grid systems. The laboratory will be a resource for Smart Grid equipment suppliers and integrators, and electric utilities to allow validation of system designs before deployment.

Codes Claimed Savings Work Group

Through a $126,425 EETF grant, the Midwest Energy Efficiency Alliance (MEEA) is facilitating a working group, including the Illinois utilities, DCEO and other stakeholders, to explore and facilitate formation of a program to improve compliance with the Illinois Energy Conservation Code and to claim the resulting energy savings under the Illinois Energy Efficiency Portfolio. The program will build on DCEO's current Building Codes Training and Technical Assistance Program. The expanded program is expected to produce real, measureable energy savings, and to help ensure that new homes in Illinois are built to be energy efficient. The project will determine how such a program can be developed; how to determined claimable savings; develop a program worksheet for cost effectiveness analysis; and incorporate findings into the next DCEO and utilities program filings. The working group is also vetting the outcomes through the Stakeholder Advisory Group and Illinois Commerce Commission to increase support for adoption and inclusion in future utility program filings.

Activity

- Organize teleconferences and meetings to review progress, identify issues and propose ways of addressing them.
- Communication with DCEO and individual utilities to address specific problems faced by a specific organization.
- Research and analyze policy relevant data
- Provide information on activity in other states.
- Find and tap into expertise from other regions of the country.

Products:

1. Developed a utility-DCEO-MEEA Teaming Agreement
2. Researched and produced defensible construction data for both residential and non-residential construction.
3. Estimated of potential savings from the program. (Annual electric potential energy savings are 127,000 MMBTU/year and annual natural gas potential energy savings are 250,000MMBTU/year)
4. Researched and presented on codes activities from other states (Estimate of energy savings from Rhode Island)
5. Produced memo on administrative costs of running the program elements. (Figured out the various program elements and the administrative costs associated with them

including: codes collaborative, third party program, circuit riders, utility administrative support) (See Attached Memo)

6. Developed Third Party Enforcement Memo
7. Research on how other states run a third party program.
8. Developed Scope of Work for baseline compliance study.
9. Tapped into experts from the Northwest on the use of third party enforcement.)
10. Developing list (and description of) program elements along with cost estimates for each.
11. Working through TRC worksheet for both commercial and residential construction .